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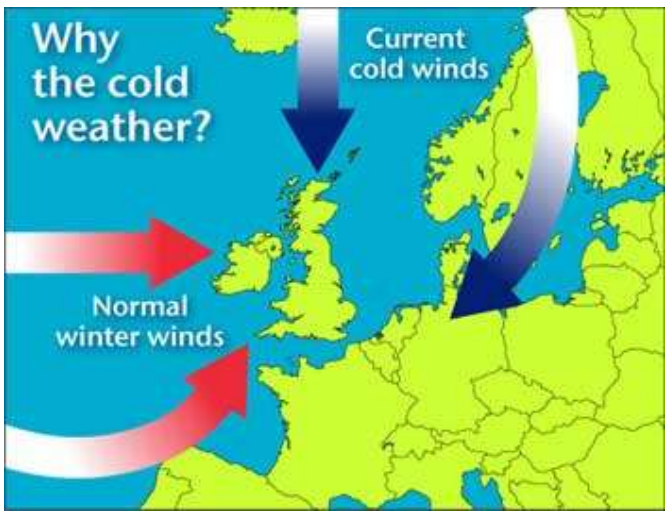
What's causing the cold weather?

6 January 2010

In most winters, and certainly those in the last 20 years or so, our winds normally come from the south-west. This means air travels over the relatively warm Atlantic and we get mild conditions in the UK. However, over the past three weeks the Atlantic air has been 'blocked' and cold air has been flowing down from the Arctic or the cold winter landmass of Europe.



The low temperatures in the UK have also been accompanied by snow. This is because areas of low pressure have been running in from the north-east, tracking across the North Sea and picking up moisture along the way, which falls as snow.

However, it is not cold everywhere in the world. North-east America, Canada, North Africa, the Mediterranean, and south-west Asia have all seen temperatures above normal – in many places by more than 5 °C, and in parts of northern Canada, by more than 10 °C.

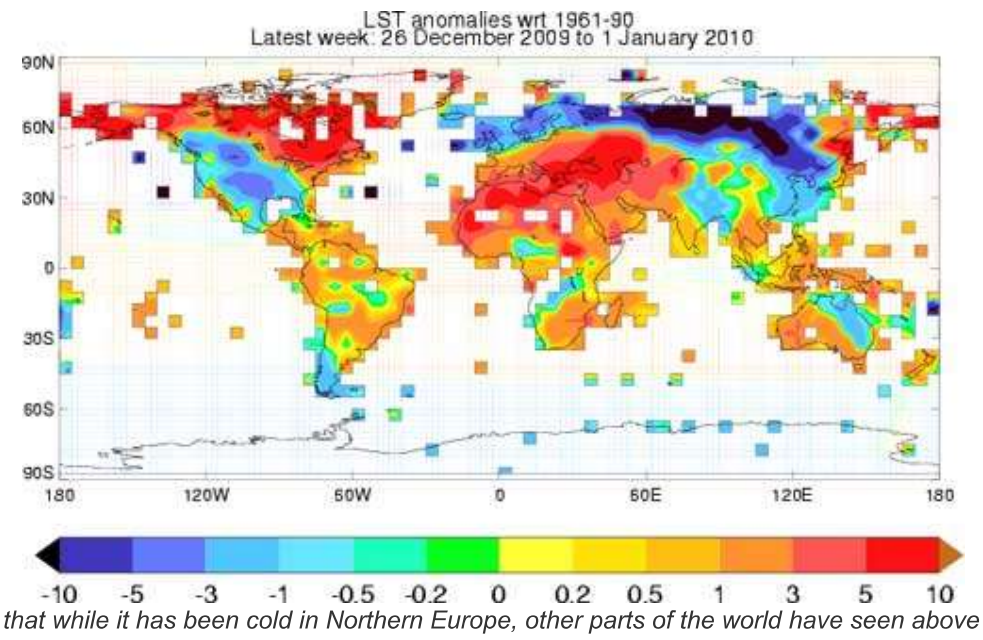


Fig 1. *The map shows that while it has been cold in Northern Europe, other parts of the world have seen above average temperatures.*

Is it colder than average?

The mean UK temperature for December was 2.1 °C, making it the coldest for 14 years and colder than the long-term average for December of 4.2 °C. However, December was one of only two months in 2009 which had a below-average mean temperature.

What does this say about climate change?

Climate change is taking place as the earth continues to warm up.

In the UK, 2009 as a whole was the 14th-warmest on record (since 1914). This above-average temperature trend was reflected globally, with 2009 being the fifth-warmest year on the global record (since 1850).

The current cold weather in the UK is part of the normal regional variations that take place in the winter season. It doesn't tell us anything about climate change, which has to be looked at in a global context and over longer periods of time.